

1 17. A method of deferring the rebalancing of a tree data  
2 structure comprising the steps of:  
3 (a) tracking the performance of operations upon the tree  
4 data structure; and  
5 (b) rebalancing the tree data structure when an unbalanced  
6 sub-tree of the tree data structure reaches a threshold level  
7 greater than one, the rebalancing further comprising creating a  
8 first set of rebalancing operation tasks, the first set of  
9 rebalancing operation tasks being characterized by navigation of  
10 the tree data structure using at least an existing link,  
11 creating a second set of rebalancing operation tasks, the second  
12 set of rebalancing operation tasks being different from the  
13 first set of rebalancing operation tasks and being characterized  
14 by location of elements within the tree data structure using at  
15 least one pointer created by the first set of rebalancing  
16 operation tasks, and performing at least one operation task of  
17 the first set of rebalancing operation tasks in a first phase  
18 and at least one of the second set of rebalancing operation  
19 tasks in a second phase.

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4 data structure; and  
5 (b) rebalancing the tree data structure when an unbalanced  
6 sub-tree of the tree data structure reaches a threshold level  
7 greater than one, the rebalancing further comprising executing  
8 simultaneous rebalancing operations on the tree data structure  
9 including performing any first phase operation task of each of  
10 the simultaneous rebalancing operations in a first phase using  
11 parallel processes, developing a set of serial rebalancing  
12 operations during the first phase, and performing any second  
13 phase operation task of each of the simultaneous rebalancing  
14 operations in a second phase, the second phase operation task  
15 having at least one of the set of serial rebalancing operations.